135,100

PATENT SPECIFICATION

Application Date. Mar. 19, 1919. No. 6832/19.

Complete Left, May 17, 1919.

Complete Accepted, Nov. 20, 1919.

PROVISIONAL SPECIFICATION.

Improvements in Handles for Spades, Shovels, Forks and Pitchforks.

I, HERBERT LAURENCE BICKERTON, Consulting Engineer, of "Alton", Brampton Road, St. Albans, Herts, do hereby declare the nature of this invention to be as follows:—

This invention relates to improved handles for spades, forks, shovels, and pitch-forks, being a new application of an additional contrivance which eliminates the dangers and inconveniences hitherto inherent to their usage, especially by allotment-holders, land-girls and the like, who have not been long accustomed to the laborious work of digging, forking, and shovelling.

Scientifically considering the various movements necessary for using such tools, it becomes apparent that there is only one of such movements that can be dangerous, and make the work excessively tiring, that is the lifting of a load when upon the tool, especially at the beginning, the weight of which is borne by the left-hand, that is, with a right-handed person, grasping the handle of the tool on its underside near to the blade or prongs, this movement necessitates bending the knees and adopting a stooping posture, during which the most trying part of the lift is made, resulting in the prevalence of rupture, heart and stomach strains and the like.

To obviate these results I arrange a small appliance or specially designed auxiliary handle to be used in conjunction with the usual shape of handle of such tool, placed at a position of about four inches from the blade or prongs, either fixed upon the usual handle of the tool or supplied separately for adjustment to such tools, and be made of wood or metal or both, either to screw or clamp on or be otherwise affixed. The fitment is preferably about ten inches long, and about the same thickness as the tool's main handle, projecting in front about six inches or thereabouts vertically from and on the main handle at its end nearest the blade or prongs, sloping down to about an inch or zero at its other end, which is the top or handle end of the tool, where it is also attached. By this arrangement when lifting a load upon the tool, an upward and slightly backward movement may be given, and the balanced forces and momentum created by both hands enables an easier lift without any side strain, than can be obtained by the old method. Further benefits are obtained, as it is unnecessary to bend the knees to reach the appliance, and each load need only be lifted six inches less, than by the usual method, both arms may be fully extended during the operation, while all chances of unequal side strains, twists and the like are eliminated.

The benefits to be derived are immediately apparent on first handling, but

[*Price 6d.*]

its labour saving value is distinctly cumulative and increases in a ratio of proportion relative to the amount f work done.

Dated this 18th day of March, 1919.

HERBERT LAURENCE BICKERTON.

COMPLETE SPECIFICATION.

Improvements in Handles for Spades, Shovels, Forks and Pitchforks.

I, HERBERT LAURENCE BICKERTON, Consulting Engineer, of "Alton", Brampton Road, St. Albans, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

This invention relates to improvements in handles for spades, forks, shovels and pitchforks. The object of the invention is to permit more effectual tools and eliminate the dangers inherent to their usage, to persons not long accustomed to the laborious work of digging, forking, shovelling and the like, by providing an additional handle, which has been proved by practical demonstrations to eliminate all risks of rupture, heart and stomach strains, and enable twice the amount of work to be done without additional fatigue. Such additional or auxiliary handle is either built upon the main handle of the implement or supplied separate for simple adjustment to tools herein described. My invention may be made of one or more pieces, either of wood or metal or both and attached by screws or clamps or otherwise affixed, in a lengthways and vertical position on the main handle of the implement, commencing at about four inches from the blade or prong end, where the hand grip portion is projected vertically and held at about six inches above the main handle, sloping lengthways for its length of about ten inches, to about one inch, more or less, above the main handle, where it is also rigidly fixed in a similar way. The said hand grip portion may be about the same diameter as the tool's main handle, and when required may be fitted with a revolving sleeve upon it to prevent chafing of the hand. The hand grip portion is supported by one or more vertical supports or framework made of any suitable material, either in one or more pieces for fixing rigidly upon, or built in the main handle of the implement. I am aware that various distorted and cranked shaped main handles offset have been suggested, but such have not found much favour or been generally adopted for various reasons.

In order to further explain my invention I will describe the same in its simple form, with examples illustrated by drawings, it being understood that the construction and form may be reasonably modified to suit the requirements of utility and economy in manufacture.

Referring to the drawings accompanying this specification:—

Fig. 1 is a perspective view of a fork fitted with my adjustable auxiliary handle.

Fig. 2 is a perspective view of a fork having my additional or auxiliary handle built upon the main handle of the implement.

Fig. 3 is a perspective view of my auxiliary adjustable handle of a slightly different design to Fig. 1.

The same letters of reference are employed to denot the same parts in all the drawings as hereunder enumerated:—

A, is the hand grip portion;

B, the vertical supports or framework;

C, the main handle of implement;
D, D, th clamps.

In the form of the invention shown on the drawing at Fig. 1 the vertical supports B, B, or framework also act as clamps, being made of thin metal, bent to surround the main handle of the tool and bolted together by nuts and bolts or rivetted, whereas in Fig. 3 the clamps D, D, are preferably separate from the framework of the auxiliary handle and consist of one or more pieces of metal arranged to surround, or partly so, the main handle, and on the reverse side to that shown are preferably provided with a bolt or bolts with nuts to securely tighten and rigidly fix the auxiliary handle to the main handle of the implement.

In Fig. 2 I show the auxiliary handle in another form and built on the main handle of the implement, the vertical portion B and the handle A are in one piece and firmly fixed to C and preferably bound by a metal band or strip on the outside as shown.

I cannot confine myself to the exact construction as shown, as it is obvious several modifications could be adopted without substantially altering the combination and its objects.

Having now particularly described and ascertained the nature of my said invention, and in what manner the same is to be performed, I declare that what I claim is:—

1. An auxiliary adjustable handle for attachment to, and use with spades, shovels, forks and pitchforks constructed of one or more pieces for rigidly fixing vertically and lengthways upon the main handle of the implement at any position between the two ends substantially as shown and for the purposes set forth.

2. An auxiliary or additional handle, built in one or more pieces upon the main handles of spades, shovels, forks and pitchforks, and in combination therewith, arranged vertically and lengthways at any position between the two ends of the main handle of the implement, substantially as described and shown and for the purposes set forth.

Dated this 17th day of May, 1919.

HERBERT LAURENCE BICKERTON,
"Alton," Brampton Road, St. Albans, Herts.

Redhill: Printed for His Majesty's Stationery Office, by Love & Malcomson, Ltd.—1919.

135,100. BICKERTON'S COMPLETE SPECIFICATION. (1 SHEET)

Fig 1.

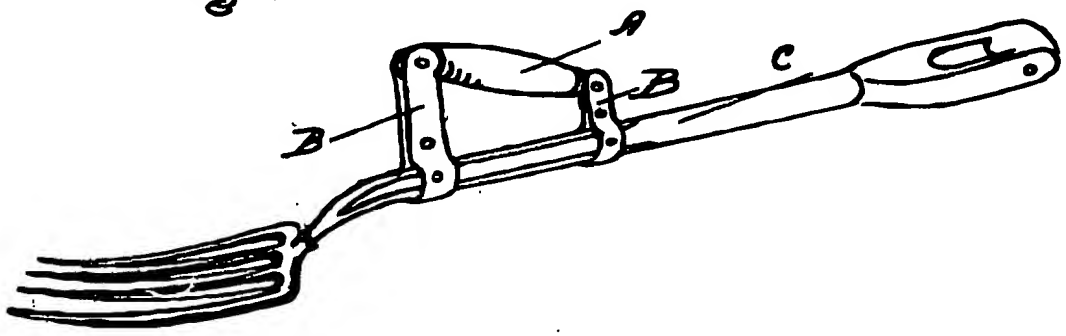


Fig 2.

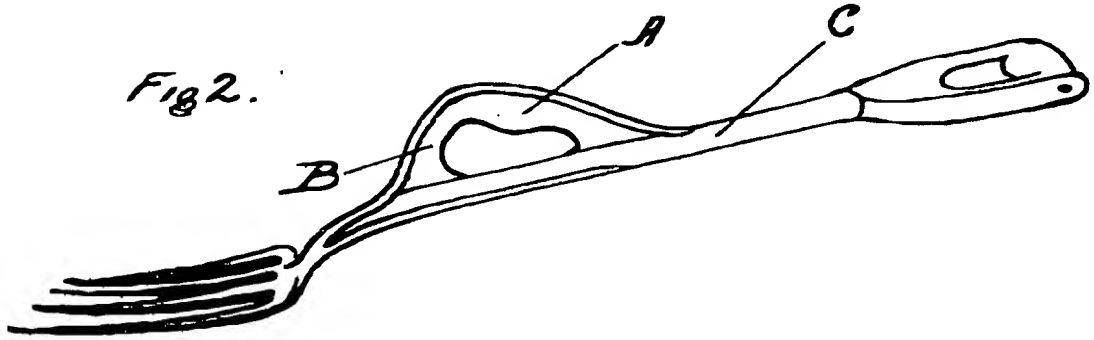
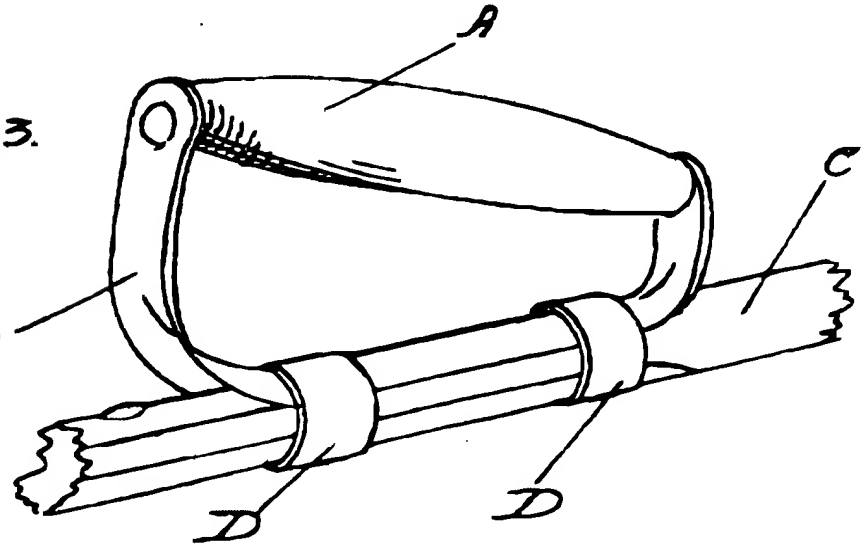


Fig 3.



[This Drawing is a reproduction of the Original on a reduced scale.]